

DESCRIPTIONS OF TWO NEW GENERA AND SEVEN NEW
SPECIES OF CYPRINIDÆ FROM CHOSEN

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THREE PLATES

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In the present paper, the writer proposes two new genera and seven new species of small fishes of Cyprinidae, known as members adapted in mountain streams. It is based on a collection made by the writer and his friends, and is now preserved in the Preparatory Department of the Keijo Imperial University.

SUBFAMILY CYPRININAE

Coreoleuciscus gen. nov.

Type: *Coreoleuciscus splendidus* Mori (Pl. 11, fig. 1.)

Body elongate, slender, and compressed. Head moderate, compressed; snout elongate, pointed, and produced; eye small, subinferior, and horse-shoe-shaped; no barbels; pharyngeal teeth 5.2-2.5; inter-orbital space more or less flattened. Intestine short; peritoneum dark brown. Scales rather large, about forty in lateral line; lateral line almost straight and continuous. Origin of dorsal anterior, before ventrals, nearer the tip of snout than the base of caudal, and its base long; anal higher than dorsal, its origin well behind the tip of depressed dorsal; caudal deeply emarginate. All fins with distinct broad blackish crossbands.

Remarks: The present genus is closely related to *Leuciscus* Cuvier and its allied genera. More anteriorly situated dorsal than ventrals, higher anal than dorsal, smaller eyes, and larger scales are characteristic of *Coreoleuciscus*, which distinguish it from the latter.

Coreoleuciscus splendidus sp. nov. (Pl. 11, fig. 1)

Corean name: Sal-koki (Ko-ryo)

Head 4.2 in body length; depth 5.9; D. II, 8; A. II, 7; P. 14;

V. 8; scales 4.5-39-3; width of head 1.8 in its length; eye 7.0 in head; snout 2.9; interorbital space 4.2; pectoral 1.2; ventral 1.5; pharyngeal teeth 5.2-2.5, slightly hooked and with rather narrow grinding surface.

Body elongate, slender, and compressed. Head elongate, pointed, compressed, the sides somewhat flattened, and upper profile convex; snout rather long, pointed, and produced; eye very small, superolateral, and 2.0 in snout; mouth inferior, nearly horizontal; maxillary protractile, and reaching posteriorly to nostrils; lips fleshy; no barbels; nostrils close together on the snout above and nearer eye than the tip of snout; interorbital space more or less flattened. Gill opening large; gill membranes broadly joined to isthmus; gill-rakers 5 + 9, short; pseudobranchiae present. Intestine short, with a single convolution; peritoneum dark brown; air-bladder rather small, bipartite; lateral line almost straight and continuous; scales large, cycloid, and imbricated; pectoral flap small; ventral flap well developed.

Origin of dorsal before ventrals, nearer the tip of snout than the base of caudal, the longest ray 1.4 in head and about equal to its base, its edge concave, and when depressed not reaching the origin of anal; origin of anal about midway between the origin of ventrals and the base of caudal, the longest ray of anal longer than dorsal, and when depressed scarcely reaching the base of caudal, and its base 3.0 in head and 1.3 in its height; pectorals reaching a trifle over two-thirds distance to the origin of ventrals; ventrals well behind the origin of dorsal and reaching over two-thirds distance to the origin of anal; caudal forked and its lower lobe longer than upper; caudal peduncle moderate long, compressed, and its least depth 2.4 in head.

Colour in formalin dark slaty brown above and silvery below, the sides along lateral line with a distinct broad bluish longitudinal band, from the tip of snout passes through eye and backwards to the base of caudal, and above the band with a yellowish longitudinal band; dorsal and caudal yellowish with two black crossbars; other fins yellowish with a black crossbar.

Total length 125 mm.

Described and figured from a female specimen from the River Kan at Waiyo, Central Chōsen.

Collected specimens: From Waiyo. May, 1925, 2 examples besides the type; the River Kan at Koryo, March, 1928, 3 examples; the same river at Mt. Godai, October, 1933, 1 example; Tanyo, August, 1928, 3 examples; the River Rinshin at Isen, August, 1925, 5 examples; Kaijō, May, 1925, 3 examples; the River Rakuto at Kanyo, September,

1928, 3 examples; the same river at Antō, August, 1928, 1 example, the same river at Bunkei, August, 1928, 2 examples; the same river at Eishu, May, 1928, 4 examples; the River Kin at Chin-an, May, 1928, 2 examples; the same river at Ko-kan, August, 1928, 2 examples; the River Senshin at Junshō, May, 1925, 1 example; Sanchoku, Kogen-do, September, 1927, 3 examples.

Measurements of *Coreoleuciscus splendidus*

Localtiy	Total length	D.	A.	Head	Depth	Eye	Snout	Inter-orbital	Caudal peduncle		P.	V.	Scales
									Depth	Length			
Waiyō ^{Type} ♀	125	II, 8	II, 7	4.2	5.9	7.0	2.9	4.2	2.4	1.1	1.2	1.5	39 $\frac{4.5}{3}$
" ♀	104	II, 8	II, 7	4.6	5.6	5.8	2.7	4.0	2.1	1.1	1.0	1.2	40 $\frac{4.5}{3}$
Koryo ♂	100	II, 8	II, 7	4.6	6.3	5.1	2.5	4.3	2.2	1.2	1.1	1.25	41 $\frac{4.5}{3}$
" ♀	82	II, 7	II, 7	4.2	5.7	4.8	2.7	4.1	2.3	1.2	1.1	1.25	41 $\frac{4.5}{3}$
Mt. Godai ♀	117	II, 7	II, 6	4.7	4.9	5.5	2.7	4.1	2.05	1.25	1.1	1.3	41 $\frac{4.5}{3}$
Tan-yo ♂	77	II, 7	II, 6	4.2	6.1	4.8	2.9	4.5	2.4	1.25	1.15	1.3	40 $\frac{4.5}{3}$
Isen ♀	109	II, 7	II, 6	4.8	5.2	5.0	2.5	4.1	2.1	1.2	1.05	1.25	40 $\frac{4.5}{3}$
" ♀	101	II, 8	II, 6	4.4	5.1	5.5	2.7	4.0	2.1	1.2	1.05	1.25	40 $\frac{4.5}{3}$
" ♀	100	II, 7	II, 6	4.3	4.9	4.8	2.7	4.0	2.1	1.2	1.05	1.28	40 $\frac{4.5}{3}$
Kai-jo ♀	141	II, 7	II, 6	4.8	4.9	6.0	2.7	4.0	2.05	1.2	1.0	1.2	40 $\frac{4.5}{3}$
" ♂	121	II, 8	II, 7	4.8	5.9	5.1	2.7	4.1	2.1	1.0	1.0	1.15	41 $\frac{4.5}{3}$
" ♂	99	II, 7	II, 6	4.5	5.4	4.8	2.7	4.2	2.2	1.2	1.1	1.25	39 $\frac{4.5}{3}$
Kan-yo ♀	92	II, 7	II, 7	4.1	5.1	5.0	2.7	4.0	2.5	1.3	1.2	1.5	39 $\frac{4.5}{3}$
" ♀	76	II, 7	II, 7	4.4	5.2	4.5	2.8	4.0	2.2	1.25	1.2	1.3	40 $\frac{4.5}{3}$
Antō ♂	88	II, 7	II, 6	4.4	5.2	4.6	2.8	4.0	2.4	1.15	1.1	1.25	40 $\frac{4.5}{3}$
Bun-kei ♀	106	II, 8	II, 8	4.3	5.2	4.9	2.8	4.0	2.3	1.2	1.1	1.25	40 $\frac{4.5}{3}$

Ei-shu ♀	104	II, 7	II, 7	4.4	5.2	4.8	2.8	4.1	2.1	1.2	1.1	1.25	40 $\frac{4.5}{3}$
Chin-an ♀	106	II, 8	II, 7	4.4	4.9	5.0	2.7	4.2	2.2	1.25	1.1	1.25	39 $\frac{4.5}{3}$
" ♂	91	II, 8	II, 7	4.25	5.2	4.6	2.8	4.3	2.2	1.25	1.05	1.2	40 $\frac{4.5}{3}$
Kokan ♀	93	II, 8	II, 6	4.3	5.1	5.1	2.7	4.2	2.1	1.2	1.05	1.2	40 $\frac{4.5}{3}$
" ♀	91	II, 8	II, 6	4.25	5.1	4.9	2.9	4.0	2.3	1.15	1.1	1.4	39 $\frac{4.5}{3}$
Jun-shō ♂	74	II, 7	II, 6	4.1	5.8	4.2	2.8	4.2	2.5	1.4	1.2	1.45	39 $\frac{4.5}{3}$
San-choku ♀	106	II, 7	II, 6	4.65	4.9	5.1	2.8	4.0	2.3	1.1	1.1	1.4	40 $\frac{4.5}{3}$

Pseudopungtungia gen. nov.

Type: *Pseudopungtungia nigra* Mori (Pl. 11, figs. 2-3)

Body elongate, oblong, and compressed. Head rather small, depressed, and pointed; snout long, longer than postorbital portion, and produced; mouth small, inferior, horse-shoe-shaped; the edge of mandible more or less horny in the middle; maxillary reaching to nostrils; maxillary barbels small, its length shorter than eye diameter; eye rather small; interorbital space broad, slightly convex. Intestine short; peritoneum black. Scales moderate, cycloid, and imbricated. Origin of dorsal nearer the tip of snout than the base of caudal; and inserted behind the tip of depressed dorsal; caudal emarginate; ventrals inserted slightly before the origin of dorsal. All fins except pectorals with distinct broad blackish crossbars.

Remarks: The present genus is closely related to the genus *Pungtungia* Herzenstein; but differs from it in having inferior and horse-shoe-shaped mouth, instead terminal, transverse mouth, longer snout, posteriorly situated eye, and all fins except pectorals with distinct broad black crossbars.

Pseudopungtungia nigra sp. nov. (Pl. 11, figs. 2-3)

Japanese name: Kuro-mugitsuku

Head 4.5 in body length; depth 4.4; D. III, 8; A. II, 7; P. 16; V. 9; scales 6-40-4; width and height of head 1.7 in its length; eye 4.2 in head; snout 2.2; interorbital space 2.7; pectoral 1.2; ventral 1.2; pharyngeal teeth 5-5.

Body moderately elongate, compressed, and somewhat broad forward. Head rather small, subconical, and pointed; snout long, longer than postorbital portion, and produced; mouth small, inferior, horse-shoe-shaped; maxillary protractile and reaching below hind margin of nostrils; upper lip fleshy; the edge of mandible more or less horny in the middle; maxillary barbels small, its length shorter than eye diameter; eye rather small, 1.8 in snout, posterior and superolateral; interorbital space broad, slightly convex; nostrils close together and nearer the anterior margin of eye than the tip of snout. Gill opening rather restricted; gill membranes attached to isthmus below the hind margin of eye; gill-rakers small and weak; pseudobranchiae present. Peritoneum black; intestine short with a single convolution; air-bladder large, bipartite. Lateral line in the middle of body, anteriorly decurved; scales moderate, cycloid, and imbricated; no pectoral flap; ventral flap present.

Origin of dorsal nearer the tip of snout than the base of caudal, second longest ray 1.4 in head, its edge convex, and when depressed, its tip not reach the origin of anal; anal a little nearer the origin of ventrals than the base of caudal, and its edge convex; pectorals reaching about three-fourths distance to the origin of ventrals; ventrals slightly behind of the origin of dorsal, and a little nearer the origin of anal than that of pectorals; caudal emarginate; caudal peduncle deep and compressed, its least depth about 1.8 in head.

Colour in formalin dark brown with a broad deep brown lateral band; dorsal, anal, ventrals, and caudal with two distinct broad blackish crossbars; pectorals grayish and no crossbars.

Total length 106 mm.

Measurements of *Pseudopungtungia nigra*

Locality	Total length	D.	A.	Head	Depth	Eye	Snout	Inter-orbital	Depth of C. P.	P.	V.	Scales
Kōkan	94	III, 8	II, 6	4.4	4.9	4.1	2.3	2.7	1.8	1.2	1.3	40 $\frac{5}{4}$
"	77	II, 7	II, 6	4.4	5.	4.2	2.2	2.7	1.8	1.1	1.2	38 $\frac{5}{5}$
"	Body length 87	III, 7	II, 7	4.7	4.4	4.5	2.1	2.6	1.7	1.1	1.2	40 $\frac{6}{5}$
"	79	III, 7	II, 6	4.7	4.6	4.1	2.3	2.8	1.7	1.1	1.2	40 $\frac{6}{4}$

Described and figured from a specimen from the River Kin at Kōkan, Central Chōsen.

Collected specimens: 4 examples besides the type from the type locality.

Remarks: The present species is closely allied to *Pungtungia herzi* Herzenstein from Chōsen and *P. hilgendorfi* (Ishikawa) from Japan Proper, but differs from both species in having narrower interorbital space, pointed snout, inferior and horse-shoe-shaped mouth, and different fin coloration. This species occurs only in the upper reaches of the River Kin.

SUBFAMILY GOBIOBOTINAE

Genus *Gobiobotia* Kreyenberg

Gobiobotia Kreyenberg, Zool. Anz., XXXVIII, 1911, p. 417 (Type: *Gobiobotia pappenheimi* Kreyenberg)

Gobiobotia Fang, Sinensia, I, No. 5, 1930, p. 57.

Gobiobotia macrocephalus sp. nov. (Pl. 11, fig. 4-5)

Japanese name: Zunaga-dojo-kamatsuka; Corean name: Kukuri (Seizen)

Head 3.75 in body length; depth 4.8; D. II, 8; A. II, 6; P. 13; V. 8; scales 6-38-4; width of head 1.4 in its length; eye 4.2 in head; snout 2.1; interorbital space 6.7; pectoral 1.1; ventral 1.2; pharyngeal teeth 5.3-3.5, slightly hooked.

Body elongate, rather stout, dorsal profile elevated and ventral side flattened. Head large, somewhat depressed, and lower surface flattened; snout somewhat bluntly rounded, concave above, and slightly produced beyond mandible; mouth inferior, horse-shoe-shaped, and protractile downward; maxillary reaching to nostrils; lips fleshy and not covered with papillae; barbels eight, of which there is a pair on the upper part of mouth corner, three pairs on the lower surface of mandible, and posterior one longest and its length longer than eye diameter, eye rather large, 2.1 in snout, very high and nearer posterior edge of operculum than the tip of snout, pupil vertically elliptical and black, interorbital space narrow and concave; two nostrils on each side, close together, separated by only a flap, in front of eye, much nearer eye than the tip of snout. Gill opening large; gill membranes extending below the middle of eye; gill-rakers 4 + 8, short, weak, and fleshy; pseudobranchiae present. Peritoneum whitish; air-bladder very small, lateral, enclosed in a bony capsule; intestine short, with a single con-

volution. Lateral line complete, extending along the middle of caudal peduncle, decurved above folded pectorals; scales moderate, cycloid, those above lateral line with a median keel; breast covered with scales after pectoral axil; a fleshy pectoral flap; ventrals with a scaly flap.

Dorsal nearly opposite ventrals, its origin nearer the tip of snout than the base of caudal by the length of maxillary, upper edge straight, and longest ray 1.5 in head; origin of anal a little nearer the base of caudal than the origin of ventrals, and when depressed reaching one and half times in length to the base of caudal; pectorals large and well dilated, and terminating a little beyond the origin of ventrals; ventrals reaching much more than three-fourths distance to the origin of anal; caudal emarginate; caudal peduncle compressed, and its least depth 3.1 in head.

Colour in formalin dark bluish above and whitish below, the sides with four broad bluish black crossbands, the base of caudal also with a bluish black crossband. Scales at upper sides of body between pectorals and ventrals usually dusky. All fins with numerous narrow dark bluish crossbars.

Total length 106 mm.

Described and figured from a specimen from the upper reaches of the South Kan River at Seizen, Central Chōsen.

Collected specimens: Many specimens, 55–115 mm. long, were obtained from the above mentioned place, August, 1927.

Measurements of *Gobiobotia macrocephalus*

Locality	Total length	D.	A.	Head	Depth	Eye	Snout	Inter-orbital	Caudal peduncle		P.	V.	Scales
									Depth	Length			
Seizen	115	II, 7	II, 6	3.7	5	4.2	2.3	6.8	3.2	1.75	1.05	1.25	39 $\frac{6}{4}$
"	88	II, 7	II, 6	3.8	5.1	4.2	2.1	7.0	3.1	1.4	1.0	1.25	40 $\frac{6}{4}$
"	87	II, 8	II, 6	3.85	5.3	4.2	2.1	7.1	3.4	1.5	1.0	1.3	39 $\frac{6}{4}$
"	89	II, 8	II, 6	3.8	4.9	3.9	2.4	6.3	3.1	1.4	0.9	1.2	39 $\frac{6}{4}$
"	76	II, 8	II, 6	3.85	5.6	3.3	2.4	6.0	3.1	1.4	0.8	1.2	39 $\frac{6}{4}$

Remarks; The present species is much more closely related to *G. tungi* Fang, Chekiang, China, in having vertically elliptical pupil instead of rounded, large pupil, abdomen scaly before ventrals, and about the same body coloration. But this species differs from the latter in having naked breast before pectoral axil only, instead of having the breast partly naked behind pectoral axil, narrower interorbital space, more slender caudal peduncle, and longer pectoral fins.

Gobiobotia brevibarba sp. nov. (Pl. 12, figs. 3-4)

Head 4.4 in body length; depth 5.8; D. II, 7; A. II, 6; P. 13; V. 8; scales 5.5-40-3; width of head 1.4 in head; eye 6.0; snout 2.1; interorbital space 5.1; pectoral 1.1; ventral 1.3; pharyngeal teeth 5.3-3.5, slender and slightly hooked.

Body moderately elongate, behind head compressed, and abdomen flat. Head depressed, its dorsal side gently elevated, and its ventral side flattened and papillose; snout bluntly rounded, with a prominent prenasal notch and longer than the length of postorbital; mouth inferior, nearly horizontal; lips thin and fleshy, well developed at the mouth angle; maxillary protractile and extending vertically from the middle of nostrils; barbels eight, very short, maxillary pair above the mouth angle, 6.0 in head and equal to eye diameter, first and second median pairs very short, shorter than eye diameter, third median pair equal to eye diameter; eye small, high, 3.0 in snout, and nearer the posterior edge of operculum than the tip of snout; interorbital space narrow, concave; nostrils two on each side, with a flap between them, nearer to eye than the tip of snout. Gill membranes extending below the hind margin of eye; gill-rakers short, weak, and fleshy; pseudobranchiae present. Peritoneum whitish; air-bladder very small, lateral, enclosed in a bony capsule; intestine short, with a single convolution. Lateral line complete, extending along the middle of caudal peduncle, slightly decurved above folded pectorals; scales moderate, cycloid, those above lateral line each with a weak median keel; abdomen before ventrals and head scaleless; a fleshy pectoral flap; ventrals with a scaly flap.

Dorsal nearly opposite ventrals, its origin nearer the tip of snout than the base of caudal by half-length of head, the first developed ray a little more than head length and higher than body depth, and its upper edge slightly concave; the origin of anal nearer the origin of ventral than the base of caudal, and when depressed reaching four-

fifths distance to the base of caudal; pectorals and ventrals nearly in a horizontal plane; pectorals very large, rhomboidal, and terminating beyond the origin of ventrals; ventrals reaching more than three-fourths distance to the origin of anal; caudal emarginate, lower lobe slightly longer; caudal peduncle very long, longer than head, and its least depth 2.2 in head.

Colour in formalin bluish brown above and pale below, the sides with a series of eight vague dark brownish spots along lateral line; all fins pale.

Total length 89 m.m.

Described and figured from a specimen from the North Kan River at Waiyō, Central Chōsen.

Collected specimens: From Wai-yō, August, 1924, two specimens besides the type; the River Rinshin at Rensen, July, 1925, a specimen.

Measurements of *Gobiobotia brevibarba*

Locality	Total length	D.	A.	Head	Depth	Eye	Snout	Inter-orbital	Caudal peduncle		P.	V.	Scales
									Depth	Length			
Waiyō	96	II, 7	II, 6	4.4	6.3	6.6	2.1	5.2	2.25	0.8	0.9	1.2	42 $\frac{5.5}{3}$
"	99	II, 7	II, 6	4.6	6.2	6.3	2.1	5.0	2.25	0.8	1.0	1.2	43 $\frac{5}{3}$
Rensen	105	II, 7	II, 6	4.4	5.6	6.0	2.1	6.0	2.3	0.9	0.95	1.3	42 $\frac{5}{3}$

Remarks; The present species is closely related to *G. pappenheimi* Kreyenberg, from North China, but differs from it in having smaller eyes, shorter barbels, narrower interorbital space and longer caudal peduncle.

Gobiobotia nakdongensis sp. nov. (Pl. 12, figs. 1-2)

Head 4.0 in body length; depth 6.8; D. II, 7; A. II, 6; P, 12; v. 8; scales 4.5-35-3; width of head 1.4 in head; eye 3.6; snout 2.4; inter-orbital space 5.0; pectoral 1.0; ventral 1.3; pharyngeal teeth 5.3-3.5, slender and slightly hooked.

Body elongate, slender; head depressed, its width being greater than its depth, the middle of ventral side of head papillose; body behind head compressed, abdomen flat; snout somewhat bluntly rounded, longer than the length of postorbital; mouth inferior, slightly curved;

lips thin, continuous, and fleshy; maxillary extending from the middle of nostrils; barbels eight, long; first lateral pair on maxillary above mouth angle, reaching nearly to a vertical line from the middle of eye, 3.1 in head length; first median pair shortest, with its insertion at the same level as the insertion of first lateral pair, reaching far over bases of second median pair, 3.6 in head; second median pair on branchiostegal membrane, reaching to a vertical line of the posterior border of eye, 2.8 in head; second lateral pair below the lower border of opercle, reaching far over the hind margin of opercle, 2.1 in head; eye large, very high, 1.3 in snout, and nearer the tip of snout than the hind margin of opercle; interorbital space narrow and concave; nostrils two on each side, close together, separated only by a flap, in front of eye; gill membranes extending below the middle of eye; gill-rakers short, weak, and fleshy. Peritoneum whitish; air-bladder very small, lateral, enclosed in a bony capsule; intestine short, with a single convolution. Lateral line complete, slightly decurved; scales cycloid, abdomen before ventrals and head scaleless; a fleshy pectoral flap; ventrals with a scaly flap.

Dorsal nearly opposite ventral origin, its origin much nearer the tip of snout than the base of caudal by the length of snout, the height of dorsal 1.1 in head and higher than body depth, its upper edge concave; anal lower than the height of dorsal, its origin nearer to the origin of ventrals than the base of caudal; pectorals and ventrals nearly in a horizontal plane; pectorals very large, rhomboidal, extending beyond the origin of ventrals; ventrals remote from anal, its origin much

Measurements of *Gobiobotia nakdongensis*

Locality	Total length	D.	A.	Head	Depth	Eye	Snout	Inter-orbital	Caudal peduncle		P.	V.	Scales
									Depth	Length			
Ei-shu	70	II, 7	II, 6	4.2	5.5	3.6	2.4	5.2	4.	1.3	1.	1.3	35 $\frac{5}{3}$
"	63	II, 7	II, 6	4.2	5.6	3.2	2.2	4.8	3.9	1.3	0.9	1.25	36 $\frac{5}{3}$
"	52	II, 7	II, 6	4.3	5.8	3.2	2.3	4.5	3.6	1.3	0.8	1.3	35 $\frac{4.5}{3}$
"	51	II, 7	II, 6	4.2	6.2	3.2	2.3	4.5	3.8	1.2	0.8	1.2	34 $\frac{4.5}{3}$
Kan-yo	56	II, 7	II, 6	4.1	6.5	3.6	2.2	4.7	3.8	1.3	1.	1.2	85 $\frac{5}{3}$

nearer the origin of pectorals than the origin of anal; caudal forked, lower lobe longer; caudal peduncle very slender, compressed, its least depth 4.0 in head.

Colour in formalin brownish above and whitish below, the sides with a series of six dark brown spots along lateral line; all fins pale.

Total length 53 m.m.

Described and figured from a specimen from the River Rakuto at Ei-shu, South Chōsen.

Collected specimen: From Ei-shu, May, 1928, 4 examples besides the type; the River Rakuto at Kan-yo, September, 1928, 1 example.

Remarks: The present species is closely allied to *G. pappenheimi* Kreyenberg from North China and *G. brevibarba* Mori from Central Chōsen, but differs from the former in having larger eyes, narrower interorbital space, moreslender caudal peduncle, and fewer scales, and from the latter in having larger eyes, longer barbels, and fewer scales.

Genus *Microphysogobio* Mori

Microphysogobio Mori, Nippon Dobutsu. Z., XXXXV, 1933, p. 114 (Type: *M. koreensis* Mori)

Microphysogobio Mori, Rep. 1st. Sci. Exp. Manchoukuo, 1934, p. 39.

Microphysogobio longidorsalis sp. nov. (Pl. 13, figs. 1-2)

Corean name: Pai-kasari (Isen)

Head 4.8 in body length; depth 4.2; D. II; A. II, 6; P. 14; V. 8; scales 5-40-3; width of head 1.4 in its length; eye 4.75 in head; snout 1.9; interorbital space 3.8; pectoral 0.9; ventral 1.2; pharyngeal teeth 5-5, very small and feeble.

Body elongate, tapering behind, and compressed. Head rather small, thick, and lower surface flat; snout bluntly rounded, rather concave above, and produced beyond the mandible; mouth small, inferior, and protractile downward; maxillary reaching below posterior margin of nostrils; lips horny, strongly cutting, and covered with developed papillae, the papillae of upper lip one-rowed; lower lip expanded, flaring at sides, a cross furrow separating off the posterior part of a lower lip as a single broad papillose pad; two maxillary barbels minute, equal to the eye diameter; eye small, 2.8 in snout, superior, and nearer the posterior margin of opercle than the tip of snout; interorbital space narrow and flat. Gill opening large; gill membranes rather broadly joined to the shoulder girdle under the

posterior margin of eye; gill-rakers 5 + 10, soft and stumpy. Peritoneum dark brown; air-bladder very small, lateral, enclosed in a bony capsule; intestine very long, with many convolutions. Lateral line complete, slightly decurved, scales moderate, cycloid; no pectoral flap; ventral flap present.

Origin of dorsal nearer the tip of snout than the base of caudal by the length of head, its upper edge greatly convex on account of so

Measurements of *Microphysogobio longidorsalis*

Locality	Total length	D.	A.	Head	Depth	Eye	Snout	Inter-orbital	Caudal peduncle		P.	V.	Scales
									Depth	Length			
Wai-yo ♂	113	III, 8	II, 6	5.0	4.3	5.1	1.9	3.6	2.3	1.0	0.75	0.85	38 $\frac{5}{3}$
" ♂	128	III, 8	II, 6	5.1	4.7	4.8	2.0	4.1	2.3	1.0	0.75	0.9	39 $\frac{5}{3}$
" ♂	105	III, 7	II, 6	4.9	4.4	4.3	2.0	3.7	2.2	0.9	0.85	1.0	40 $\frac{5}{3}$
" ♂	104	III, 7	II, 7	5.1	4.5	4.0	2.1	3.7	2.2	0.8	0.7	0.75	40 $\frac{5}{3}$
" ♀	104	III, 7	II, 6	5.1	5.4	4.1	2.2	4.	2.5	1.1	0.8	1.2	40 $\frac{5}{3}$
Sei-zen	118	II, 8	II, 6	5.1	4.5	4.7	2.0	4.1	2.1	1.1	0.7	0.9	39 $\frac{5.5}{3}$
"	84	II, 7	II, 6	5.1	5.0	4.1	2.2	3.8	2.1	0.85	0.8	1.0	40 $\frac{5}{3}$
"	85	II, 7	II, 6	5.0	5.1	4.0	2.1	4.1	2.1	1.1	0.8	1.0	39 $\frac{5}{3}$
"	69	II, 7	II, 6	4.7	5.2	3.5	2.3	4.3	2.4	1.1	0.9	1.1	38 $\frac{5}{3}$
Tan-yo	117	II, 8	II, 6	5.0	4.5	4.3	2.1	4.2	2.1	0.95	0.8	0.9	40 $\frac{5}{3}$
"	105	II, 8	II, 6	4.9	5.1	4.2	2.0	4.2	2.3	1.2	0.8	1.1	39 $\frac{5}{9}$
"	95	II, 8	II, 6	4.9	5.0	4.1	2.1	3.9	2.4	1.2	0.8	1.1	39 $\frac{5}{3}$
"	102	II, 8	II, 6	4.6	5.2	4.2	1.9	3.9	2.4	1.15	0.75	0.9	40 $\frac{5}{3}$
I-sen	98	II, 7	II, 6	4.9	5.0	4.1	2.1	3.6	2.1	0.9	0.7	0.8	40 $\frac{5}{3}$
Chin-an	75	II, 7	II, 6	5.0	5.3	3.7	2.1	4.0	2.4	1.1	0.8	1.1	40 $\frac{5}{3}$

great a length of median rays; that when depressed it reaches beyond the origin of anal and the longest ray equal to head length; the origin of anal a little nearer the origin of ventrals than the base of caudal, and the longest ray 1.2 in head, and reaching two-thirds distance to the latter; pectorals and ventrals nearly in a horizontal plane; pectorals long, the first ray stout and strong, and the longest ray reaching beyond the origin of dorsal, but not quite to the origin of ventrals; the origin of ventrals about under center of dorsal base and nearer the origin of pectorals than that of anal, and reaching two-thirds distance to the latter; caudal deeply emarginate and its lobes rather pointed; caudal peduncle rather long and compressed, its least depth 2.4 in head.

Colour in formalin dark blue brown above and whitish below; the sides and upper surface speckled with dark brown; dorsal, caudal, and anal with narrow blackish crossbars, pectorals and ventrals dusky.

Total length 118 mm.

Described and figured from a male specimen from the North Kan River at Waiyō.

Collected specimens: From Wai-yō, August, 1925, 5 examples besides the type; the South Kan River at Sei-zen, August, 1927, 3 examples; the same river at Tan-yō, July, 1927, 3 examples; the River Rinshin at Isen, August, 1927, 2 examples; the River Kin at Chin-an September, 1926, 1 example.

Microphysogobio koreensis sp. nov. (Pl. 13, figs. 3-4)

Corean name: Tol-puchi (Isen), Milpiri (Ei-yo)

Head 5.1 in body length; depth 5.8; D. II, 7; A. II, 6; P. 14; V. 8; scales 4.5-41-2; width of head 1.5 in its length; eye 4.0 in head; snout 2.3; interorbital space 4.2; pectoral 0.95; ventral 1.2; pharyngeal teeth 5-5, very small and weak.

Body elongate, slender, tapering behind, and somewhat compressed. Head small, pointed, and lower surface flat; snout bluntly pointed, concave above, and produced beyond the mandible; mouth small, inferior, and protractile downward; maxillary reaching posteriorly beyond nostrils, but not to anterior margin of eye; lips horny, strongly cutting, and covered with developed papillae, the papillae of upper lip one-rowed; two maxillary barbels minute; eye rather large, 1.4 in snout, high, and about midway in the length of head; interorbital space narrow and flat. Gill membranes a rather fleshy flap on each side

below; gill-rakers short and weak. Peritoneum dark brown; air-bladder small, lateral, enclosed in a bony capsule, the posterior very small free from the anterior; intestine very long, with many convolutions. Lateral line continuous, slightly decurved; scales moderate, cycloid, and imbricate; no pectoral flap; ventral flap present.

Measurements of *Microphysogobio koreensis*

Locality		Total length	D.	A.	Head	Depth	Eye	Snout	Inter-orbital	Caudal peduncle		P.	V.	Scales
										Depth	Length			
Ei-yo	♂	119	II, 7	II, 6	5.1	5.8	4.0	2.3	4.2	2.5	0.95	0.95	1.2	41 $\frac{4.5}{2}$
An-to	♂	122	II, 7	II, 6	4.9	6.35	4.1	2.2	4.2	2.9	1.1	0.9	1.2	42 $\frac{4.5}{2}$
"	♂	103	II, 7	II, 6	4.9	6.1	4.0	2.1	4.2	2.8	1.1	0.9	1.2	40 $\frac{4.5}{2}$
"		92	II, 7	II, 6	4.85	6.2	3.4	2.2	4.75	2.8	1.1	0.9	1.1	41 $\frac{4.5}{2}$
Ei-shu		99	II, 7	II, 6	4.9	6.1	3.5	2.3	4.0	2.5	1.1	0.8	1.1	39 $\frac{4}{2}$
Ko-kan		67	II, 7	II, 6	5.	6.3	3.1	2.1	4.3	2.6	1.1	0.8	1.1	38 $\frac{4}{2}$
"		76	II, 7	II, 6	5.	6.6	3.1	2.3	4.2	2.7	1.2	0.8	1.2	38 $\frac{4}{2}$
Kyu-rei		62	II, 7	II, 6	4.8	6.0	3.1	2.3	4.	2.8	1.2	0.8	1.2	39 $\frac{4}{2}$
Ko-shu		63	II, 7	II, 6	4.9	6.4	3.0	2.2	4.	2.5	1.25	0.8	1.2	39 $\frac{4}{2}$
Chin-an	♀	102	II, 7	II, 6	5.	5.6	3.8	2.4	4.1	2.5	1.1	0.8	1.2	39 $\frac{4}{2}$
"		81	II, 7	II, 6	4.9	5.7	3.6	2.3	3.8	2.5	1.2	0.75	1.2	39 $\frac{4}{2}$
I-sen		74	II, 7	II, 6	5.	6.	3.2	2.5	4.4	2.55	1.1	0.8	1.3	35 $\frac{4}{2}$
"		67	II, 7	II, 6	4.9	6.	3.5	2.55	4.2	2.55	1.1	0.9	1.3	35 $\frac{4}{2}$
"		72	II, 7	II, 6	5.	6.3	3.6	2.45	4.2	2.55	1.2	0.9	1.2	36 $\frac{4}{2}$
Ko-ryo	♀	81	II, 7	II, 6	4.6	5.3	3.3	2.4	4.0	2.6	1.2	0.9	1.3	38 $\frac{4}{2}$
"	♀	85	II, 7	II, 6	5.	5.3	3.7	2.35	4.1	2.7	1.1	0.8	1.3	38 $\frac{4}{2}$

Origin of dorsal nearer the tip of snout than the base of caudal by the length of head, its upper edge concave, and when depressed its tip not far reaching the origin of anal, the origin of anal about midway between the origin of ventrals and the base of caudal, and its tip reaches more than half way to the latter; pectorals and ventrals nearly in a horizontal plane; the former rather long, the first ray stout and strong, and the longest ray reaching to the origin of dorsal, but not quite to the origin of the latter, which are inserted under center of dorsal base and reaching two-thirds distance to the origin of anal; caudal deeply emarginate and its lobes pointed; caudal peduncle long and compressed, its least depth 2.5 in head.

Colour in formalin dark brown above and whitish below; all fins with narrow blackish crossbars, but anal with few brown spots.

Total length 119 mm.

Described and figured from a male specimen from the River Rakuto at Ei-yo, South Chōsen.

Collected specimens: From Ei-yo, May, 1928, 1 example of the type; the River Rakuto at Antō, August, 1928, 5 examples; the same river at Ei-shu, May, 1928, 2 examples; the river Kin at Ko-kan, August, 1928, 2 examples; the same river at Chin-an, May, 2 examples; the River Senshin at Kyu-rei, October, 1929, 1 example; the River Eizan at Ko-shu, July, 1925, 1 example.

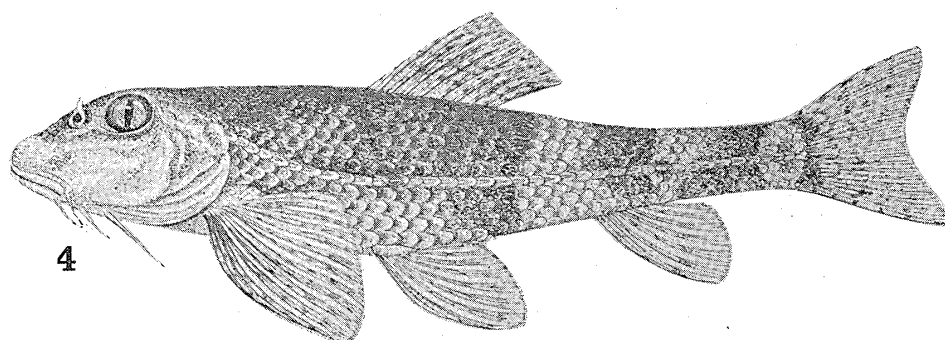
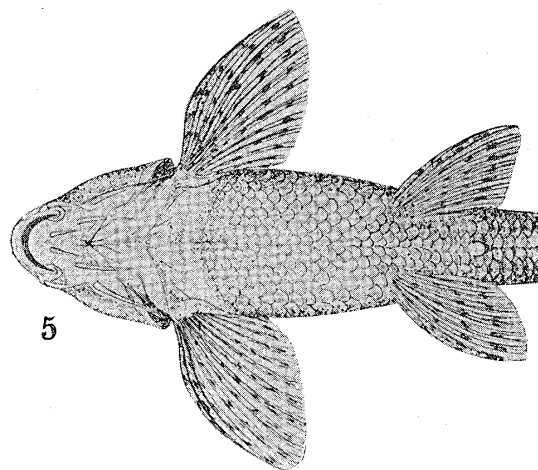
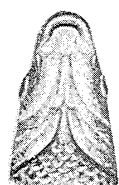
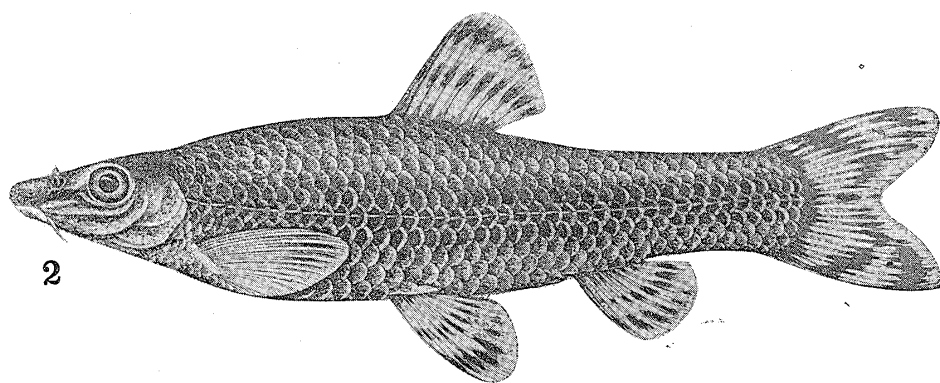
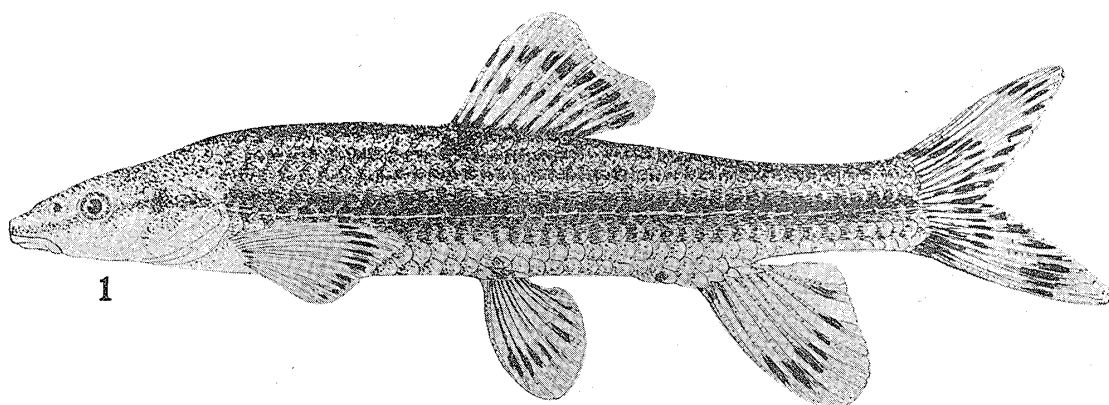
Remarks: The present species is closely related to *Mic. longidorsalis* Mori from Central Chōsen, and *Mic. yaluensis* (Mori) from North-western Chōsen, but differs from the former in having more slender caudal peduncle, less depth, shorter dorsal and its edge concave, and fewer scales in transverse series; and also differs from the latter in having smaller head and numerous scales.

EXPLANATION OF PLATE 11

- Fig. 1. *Coreoleuciscus splendidus* gen. et sp. nov. Natural size.
- Fig. 2. *Pseudopungtungia nigra* gen. et sp. nov. Natural size.
- Fig. 3. *Pseudopungtungia nigra*. Ventral side of head. Natural size.
- Fig. 4. *Gobiobotia macrocephalus* sp. nov. Natural size.
- Fig. 5. *Gobiobotia macrocephalus*. Ventral side of head and trunk. Natural size.

NEW CYPRINIDAE FROM CHOSEN
TAMEZO MORI

PLATE 11

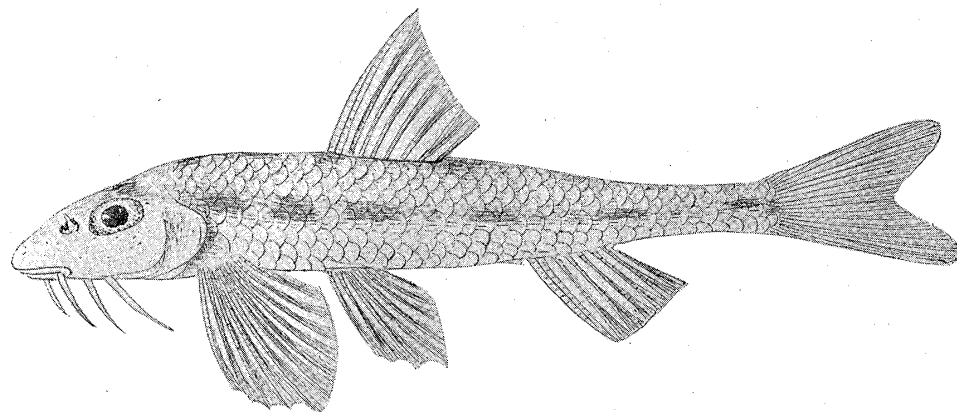


EXPLANATION OF PLATE 12

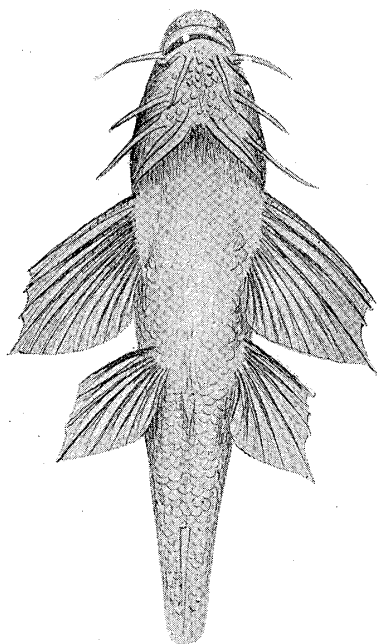
- Fig. 1. *Gobiobotia nakdongensis* sp. nov. Natural size $\times 2$.
Fig. 2. *Gobiobotia nakdongensis* Ventral side of head and trunk. Natural size $\times 2$
Fig. 3. *Gobiobotia brevibarba* sp. nov. Natural size.
Fig. 4. *Gobiobotia brevibarba*. Ventral side of head and trunk. Natural size.

NEW CYPRINIDAE FROM CHOSEN
TAMEZO MORI

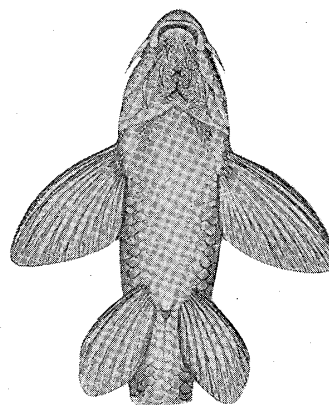
PLATE 12



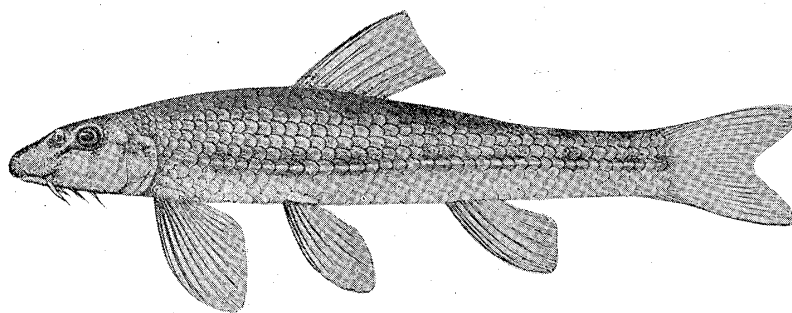
1



2



4



3

EXPLANATION OF PLATE 13

- Fig. 1. *Microphysogobio longidorsalis* sp. nov. Natural size.
Fig. 2. *Microphysogobio longidorsalis*. Ventral side of head. Natural size.
Fig. 3. *Microphysogobio koreensis* sp. nov. Natural size.
Fig. 4. *Microphysogobio koreensis*. Ventral side of head. Natural size.

NEW CYPRINIDAE FROM CHOSEN
TAMEZO MORI

PLATE 13

